

REMARKS

Reconsideration of the present application is respectfully requested.

Claims 7 – 8 have been rejected under 35 U.S.C. 112, second paragraph for being indefinite. More particularly, the Examiner has asserted that the recitation of a displacement angle of 202.5 degrees is a typing error.

This assertion is incorrect, as the displacement angle of 202.5 degrees is clearly disclosed on, for example, pg. 30, lines 15 – 19 in which it is stated that the second core sheet 123 is displaced or rotated by 202.5 degrees with respect to the first core sheet 122 in the clockwise direction when the core sheets 122, 123 are seen from the second surface 242 side of the second core sheet 123.

Therefore, because the recited displacement angle of 202.5 degrees is not a typing error and is clearly disclosed in the specification, it is respectfully requested that the rejection of claims 7 – 8 under 35 U.S.C. 112, second paragraph be withdrawn.

Claims 1, 3 – 4, 6 and 13 have been rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,986,366 to Bailey *et al.* (Bailey) in view of U.S. Patent No. 5,861,700 to Kim and U.S. Patent No. 5,142,178 to Kloster *et al.* (Kloster). For the reasons discussed below, these claims, as amended, are now in condition for allowance.

Claims 1 and 13 have been amended to recite the novel embodiment disclosed, for example, on pg. 10, lines 17 – 25 in which the receiving portion (or through hole) 258 of each core sheet 22 is displaced from the at least one projection 255 – 257 of the core sheet 22 in the axial direction of the core 21.

Bailey discloses a rotor 10 that includes a rotor shaft 12 adapted to mount the rotor 10 for rotation about an axis 13, and a core 14 mounted on the shaft 12 for rotation about the axis 13.

The core 14 includes a stack 30 of planar laminations 32 made of magnetic material. Windows 40 of each lamination are offset angularly by an angular offset about the axis 13 from lamination to lamination in step-wise fashion. (See Col. 3, Lines 29 – 31 and 46 – 49). However, as admitted by the Examiner on pg. 3, paragraphs 3(a) – 3(b) of the Office Action, Bailey fails to teach or suggest that each lamination includes an inner annular portion, at least one projection or at least one recess and a receiving portion as recited in amended claim 1. Rather, Bailey discloses that lobes (which the Examiner has called stays) 36 of the laminations 32 directly engage the outer surface 28 of the shaft 12 via convex tips 39.

Kim discloses a rotor 10 that includes a rotor core 12 composed of a plurality of stacked sheets. Each of the stacked sheets includes an outer annular portion, an inner annular portion 13 and core legs or stays 14. However, Kim also fails to teach or suggest that each stacked sheet includes at least one projection or at least one recess and a receiving portion as recited in amended claim 1.

Kloster discloses a plurality of stacked stator laminations 2 that each includes a central inner diameter 3 and an outer diameter 4. Each of the stacked stator laminations 2 also includes bolt holes 7, button-shaped extruded segments or projections 8 and compatible openings 9 or recesses.

The Examiner has asserted that the bolt holes 7 disclose receiving portions. However, the bolt holes 7 fail to teach or suggest receiving portions as recited in amended claim 1. More particularly, the bolt holes 7 are not displaced from the one of the projections 8 of the core sheet in the axial direction of the core for receiving the projection. Rather, Kloster discloses on col. 3, lines 52 – 57 that the bolt holes 7 are provided to receive the through bolts and are therefore not available to receive the projection of the adjacent core sheet.

Further, although Kloster discloses that the stator laminations include projections 8 and recesses 9, Kloster fails to teach or suggest that the stator laminations 2 are displaced one after the other by a predetermined displacement angle in a circumferential direction of the core.

Assuming *arguendo* that the bolt holes 7 of Kloster disclose receiving portions, one skilled in the art would not be motivated to modify Bailey in view of Kloster because such a modification would render the rotor 10 of Bailey unsatisfactory for its intended purposes. If a proposed modification would render the prior art invention unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. (See In re Gordon, 733 F.3d 900 (Fed. Cir. 1984); Cited in MPEP 2143.01 Aug. 2001). More particularly, Bailey discloses that providing an angular offset from lamination 32 to lamination 32 in the core permits coolant to be pumped through the passages 46 of the rotor 10 during its rotation. (See Col. 6, Lines 4 – 7). However, if one skilled in the art modified the laminations 32 of Bailey to include the projections 8, recesses 9 and bolt holes 7 of Kloster, the laminations 32 would not be able to be stacked in an arrangement in which their windows 40 are offset angularly by an angular offset in step-wise fashion. (See Col. 3, Lines 45 – 50 of Bailey). This is because the projections 8 and recesses 9 disclosed in Kloster are only sufficient to permit the stacking of the laminations 2 in an axial direction without any angular displacement. Accordingly, one skilled in the art would not be motivated to modify the laminations 32 to include the projection and recesses of Kloster.

Therefore, because Bailey, Kim and Kloster fail to teach or suggest stator laminations including receiving portions that are displaced from projections in the axial direction of the core and that are displaced one after the other by a predetermined displacement angle in a circumferential direction of the core and also because one skilled in the art would not be

motivated to modify Bailey in view of Kloster, it is respectfully requested that the rejection of claims 1 and 13 under 35 U.S.C. 103(a) be withdrawn.

Claims 3 – 4 and 6 depend from amended claim 1. Therefore, claims 3 – 4 and 6 should be in condition for allowance for the above-mentioned reasons with respect to amended claim 1.

Claims 5, 7 and 9 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Bailey, Kim , and Kloster. This rejection is respectfully traversed.

Claims 5, 7 and 9 depend from amended claim 1. Therefore, the rejection of these claims should be withdrawn for the above-mentioned reasons with respect to amended claim 1.

Further regarding the rejection of claim 9, claim 9 recites the novel embodiment disclosed, for example, on pg. 19, lines 20 – 25 in which a predetermined displacement angle is defined by the following equation: the predetermined displacement angle = $(360 \text{ degrees} - \text{the angular interval of the teeth}) / \text{a number of the stays}$. This equation allows the effective and smooth displacement of the core sheets only when the receiving portion is provided in each core sheet. As mentioned above, Bailey, Kim and Kloster fail to disclose this receiving portion. Therefore, because Bailey, Kim and Kloster do not disclose the general conditions of the displacement angle, it is respectfully requested that the rejection of claim 9 under 35 U.S.C. 103(a) be withdrawn.

The indication of allowable subject matter in claims 8 and 10 – 12 is acknowledged and appreciated.

New claims 14 – 27 are presented for examination. These claims recite features that further distinguish the present invention from the art of record. Support for new claims 14 – 27 is shown on, for example, FIGS. 9A – 10B.

Further regarding new claims 14 – 19 and 20 – 25, these claims depend from amended claims 1 and 13, respectively. Therefore, these new claims should be in condition for allowance for the above-mentioned reasons with respect to amended claims 1 and 13.

In view of the above amendments and remarks, the present application is now believed to be in condition for allowance. A prompt notice to that effect is respectfully requested.

Permission is given to charge any unanticipated fees to Deposit Account No. 50-1147.

Respectfully submitted,

A handwritten signature in black ink, appearing to be 'DGP', with a long horizontal stroke extending to the right.

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